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FIG. 1

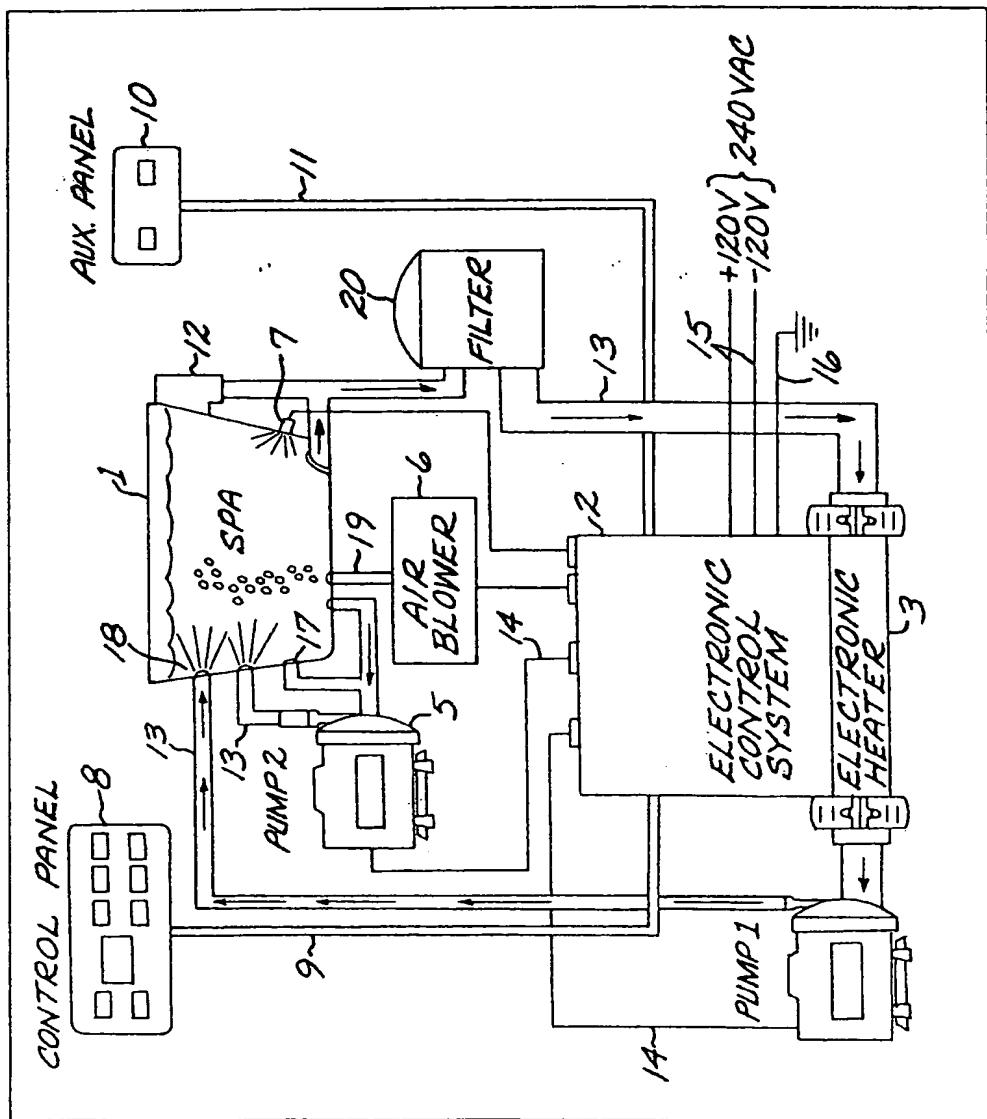
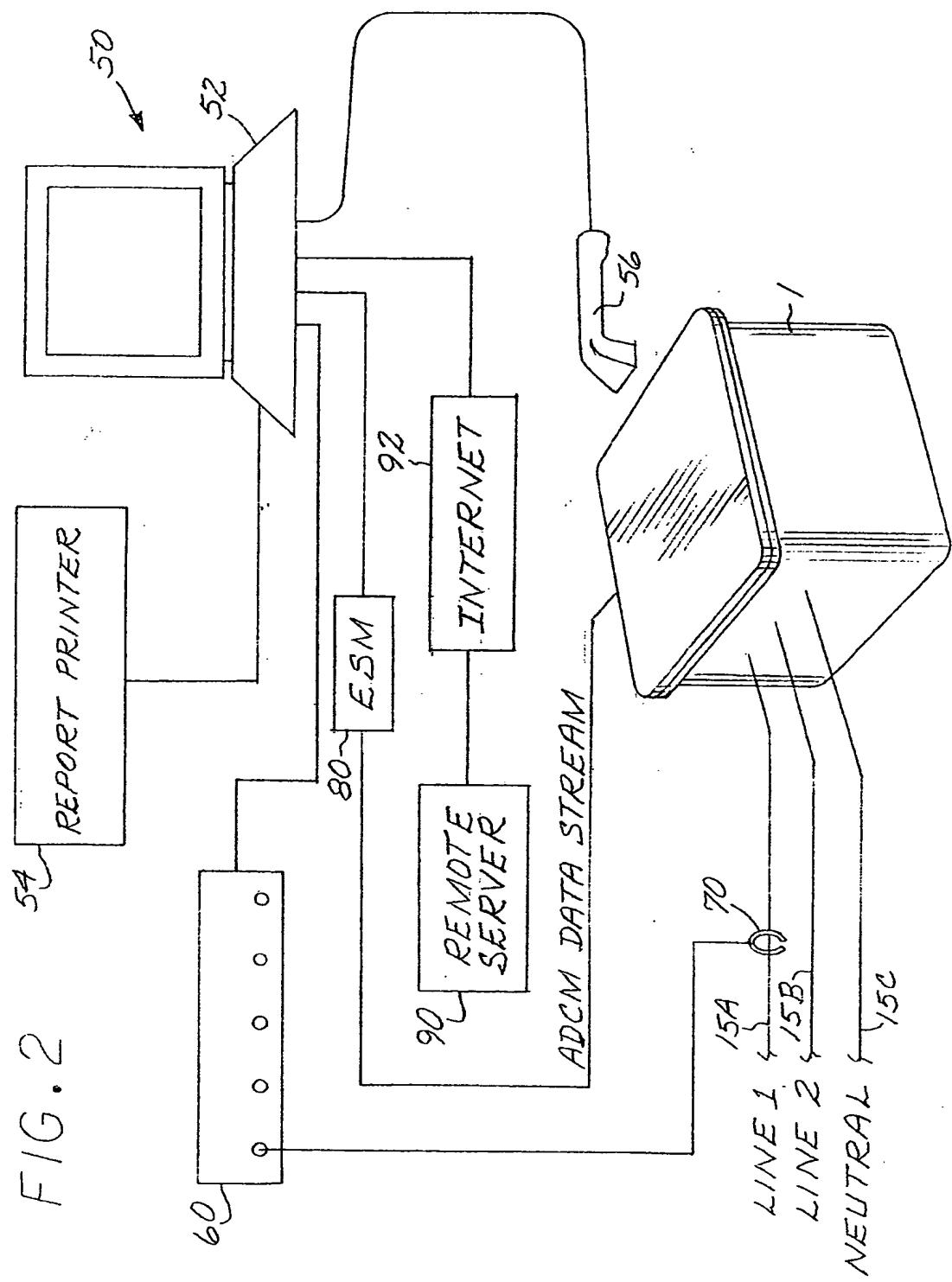


FIG. 2



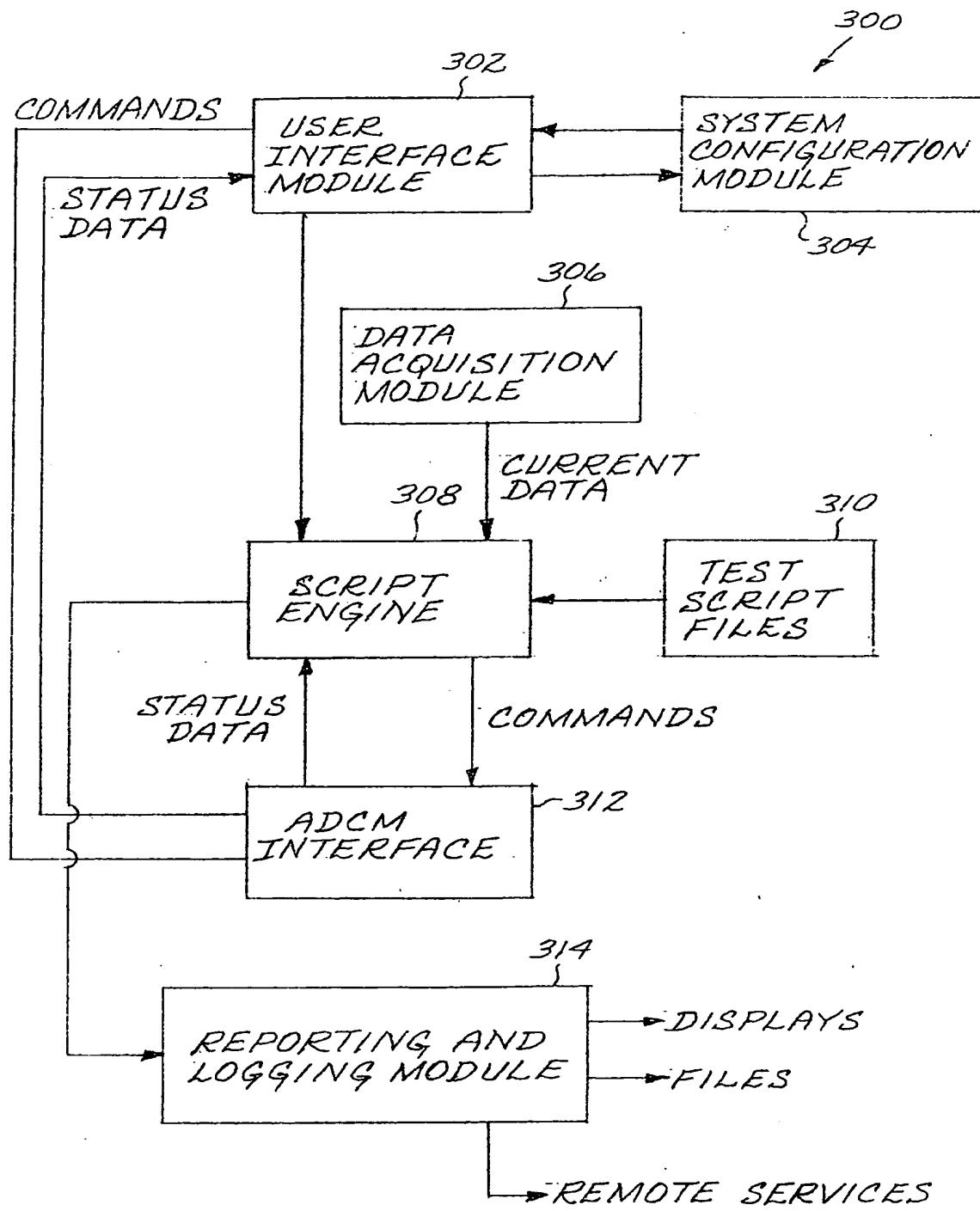


FIG.2A

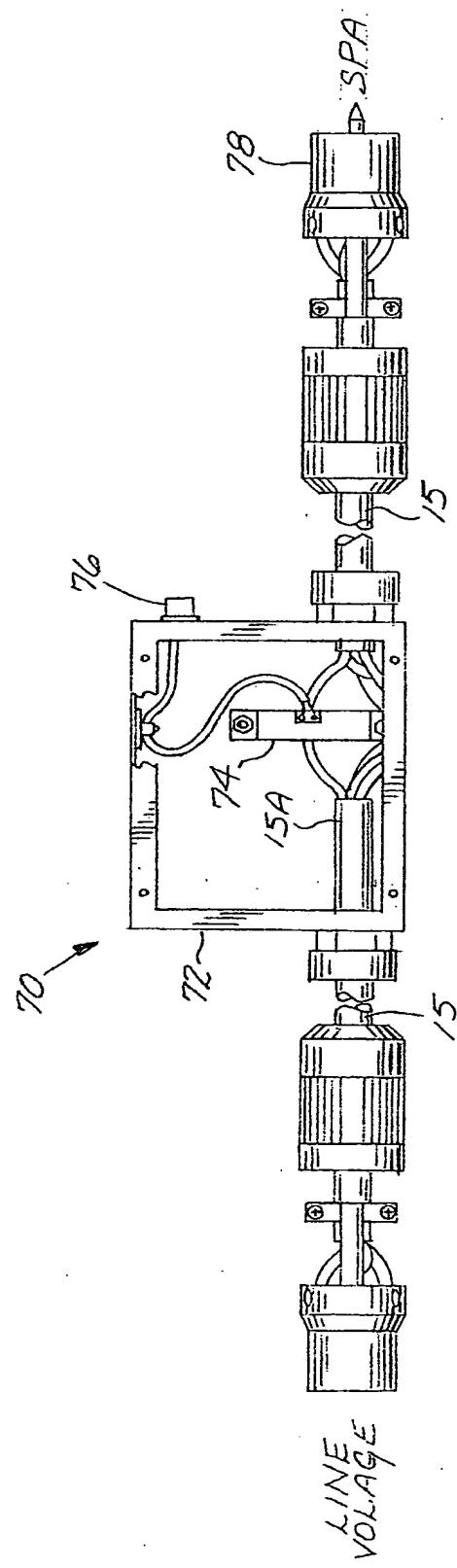


FIG. 3

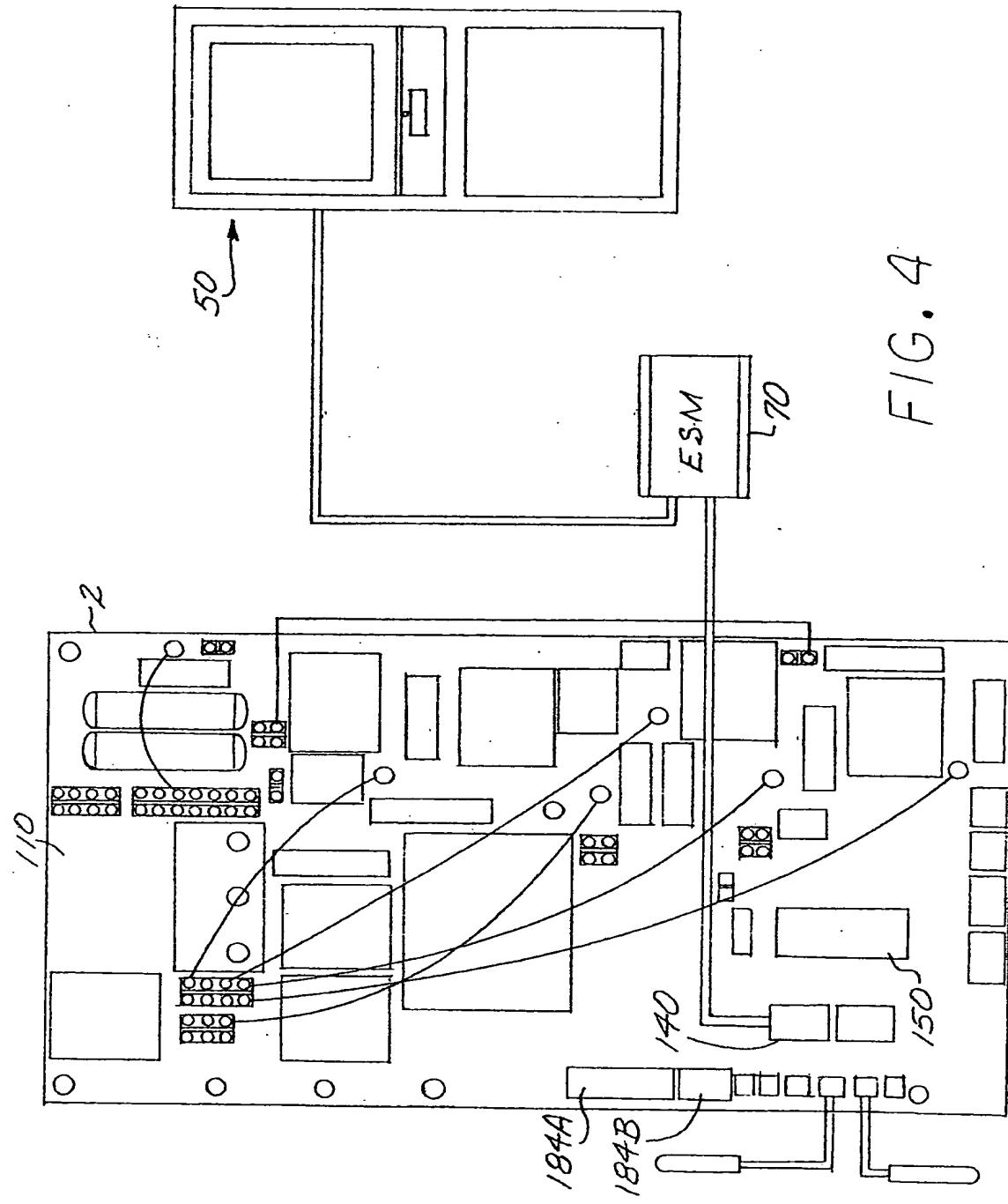


FIG. 4

FIG. 5A

FIG. 5B

'B' DIP SWITCH SETTINGS

		1	2	3	4	5	6
UP	OFF	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DOWN	ON	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	MODE	P-2 ISPD	P-2 ENABLE	BLOVER & ENABLE	FO. INSTEAD OF SPA LIGHT	N/A	PANEL SCREWBUTTOM
OFF	ON	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
OFF	ON	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
OFF	ON	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
N/A	N/A						
OFF	ON						

'A' DIP SWITCH SETTINGS

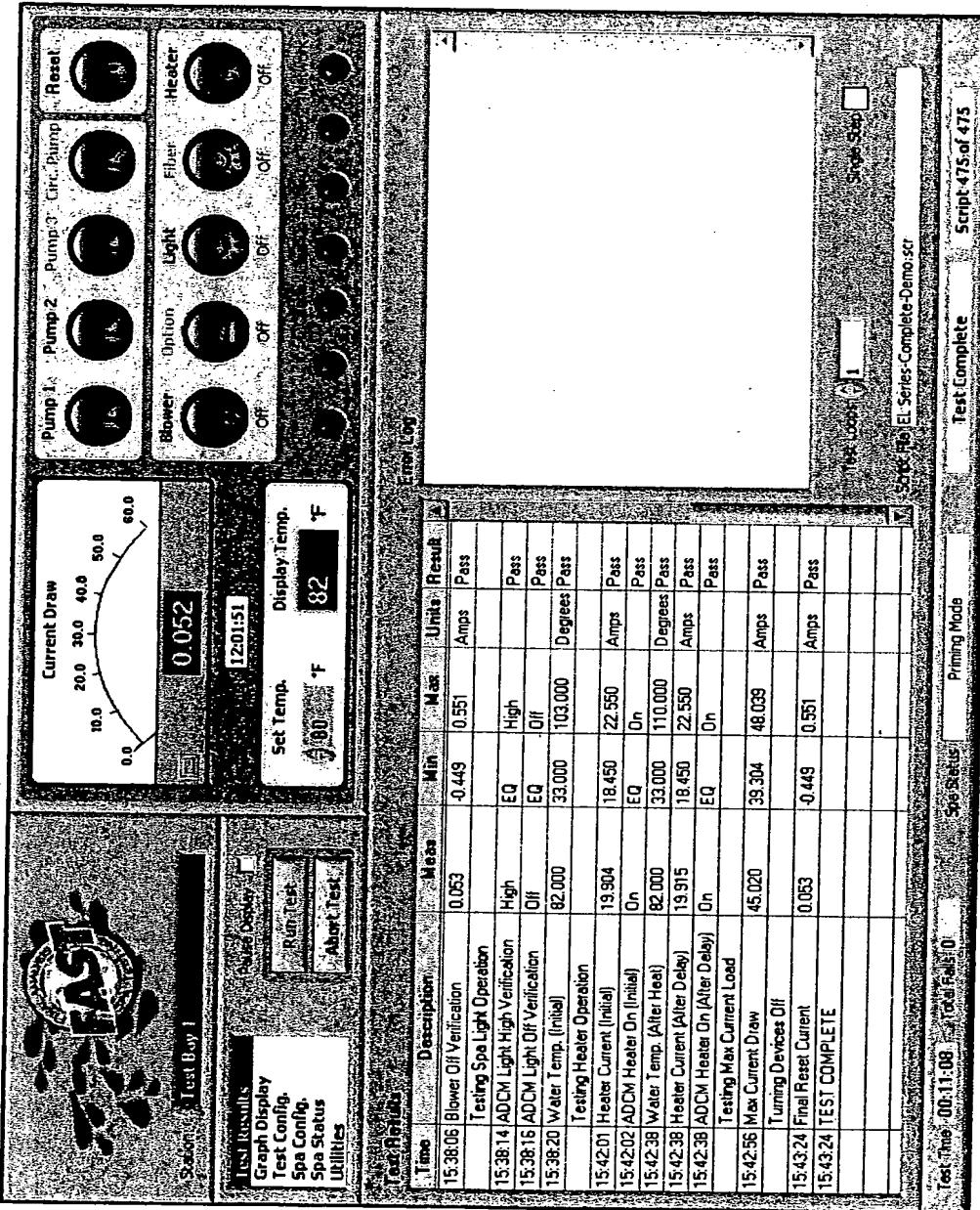


FIG. 6

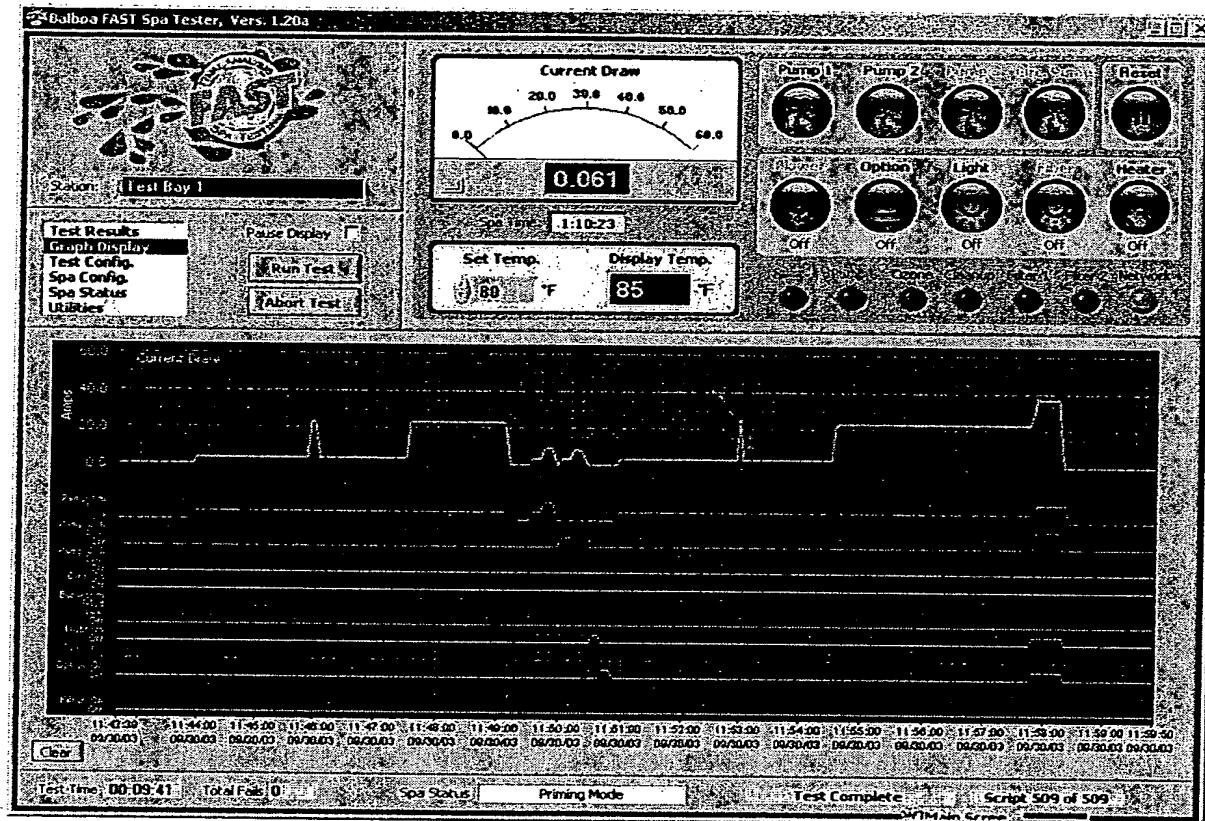


FIG. 7

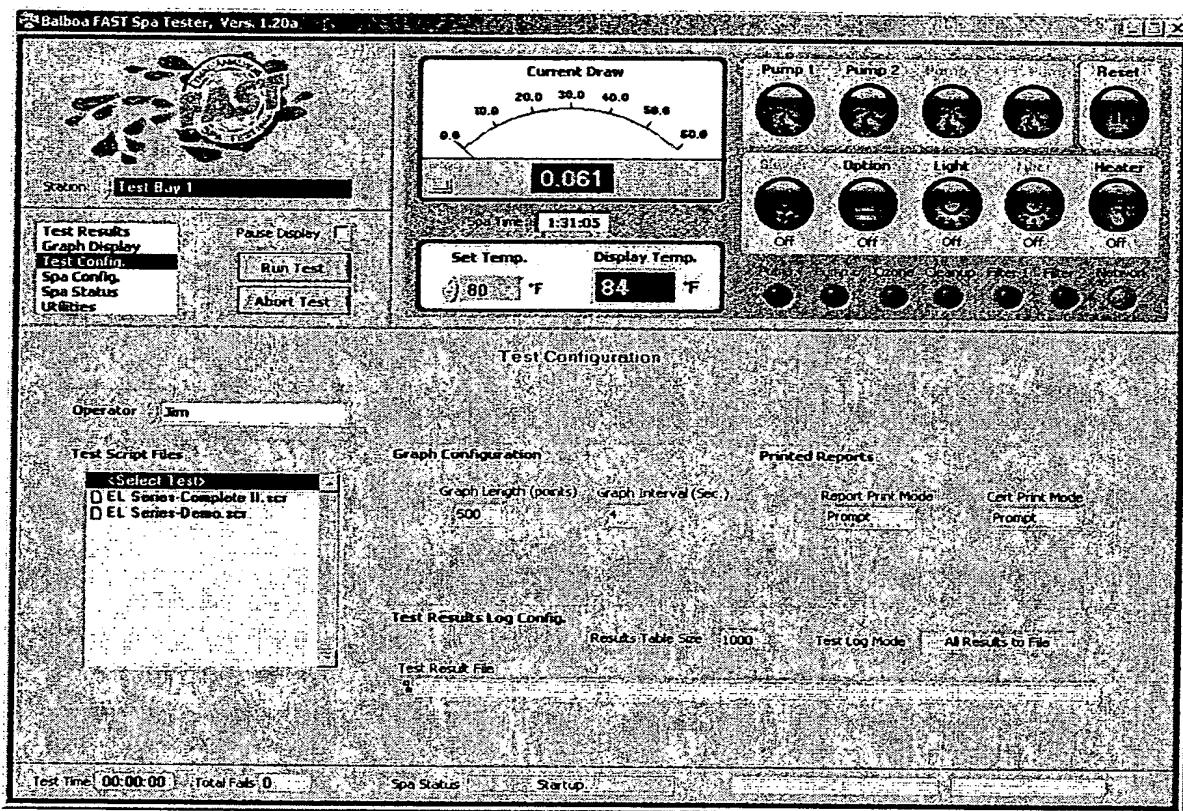


FIG. 8

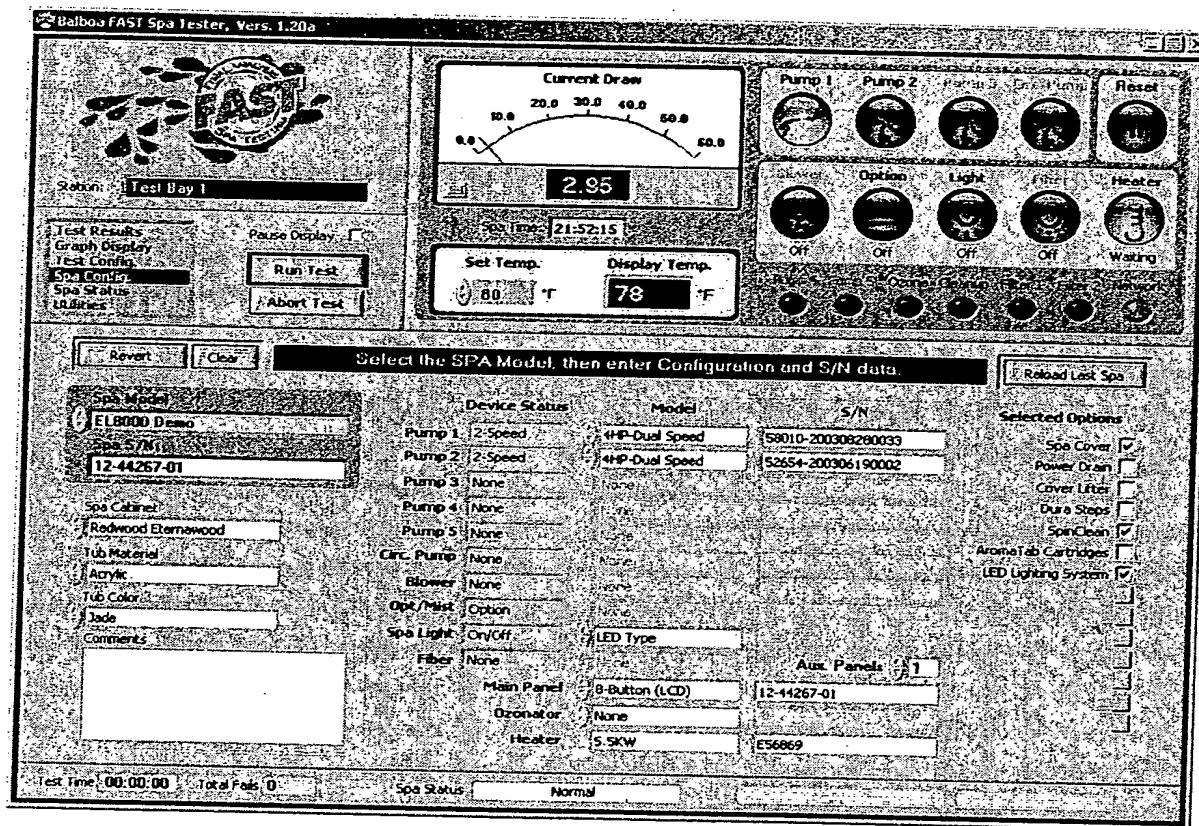


FIG. 9

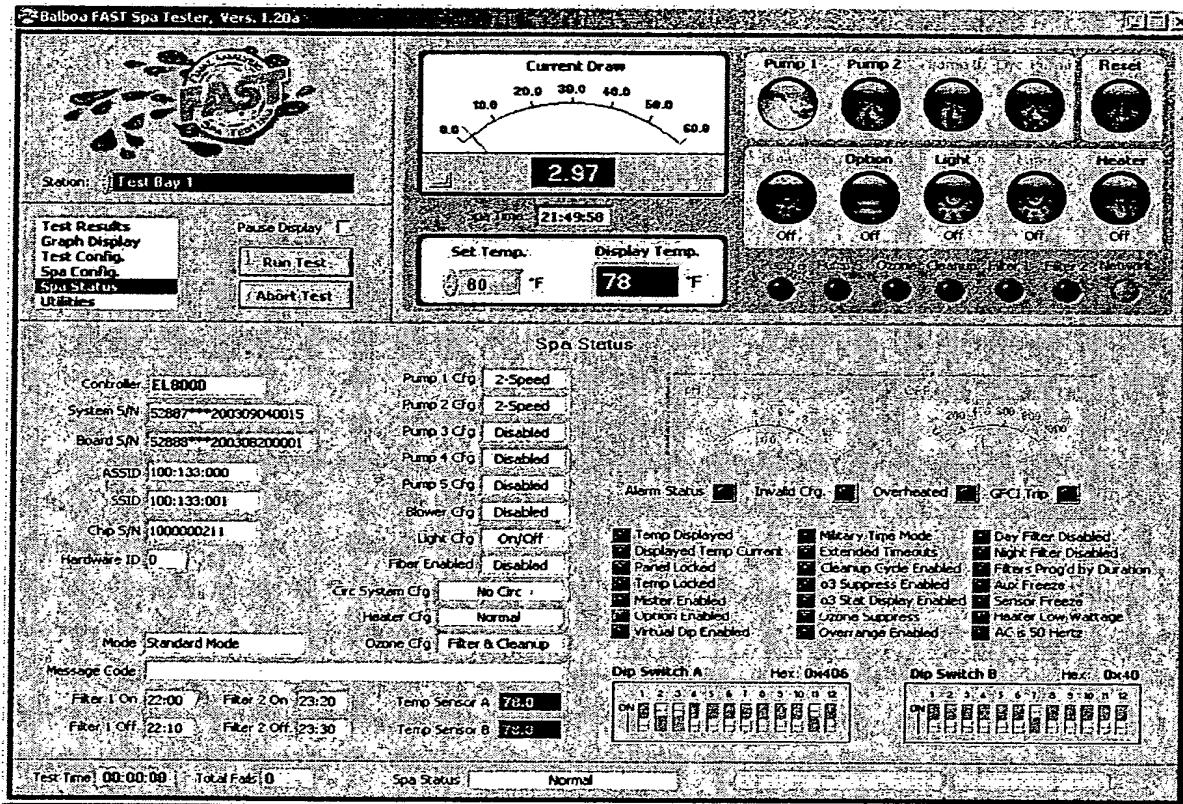


FIG. 10

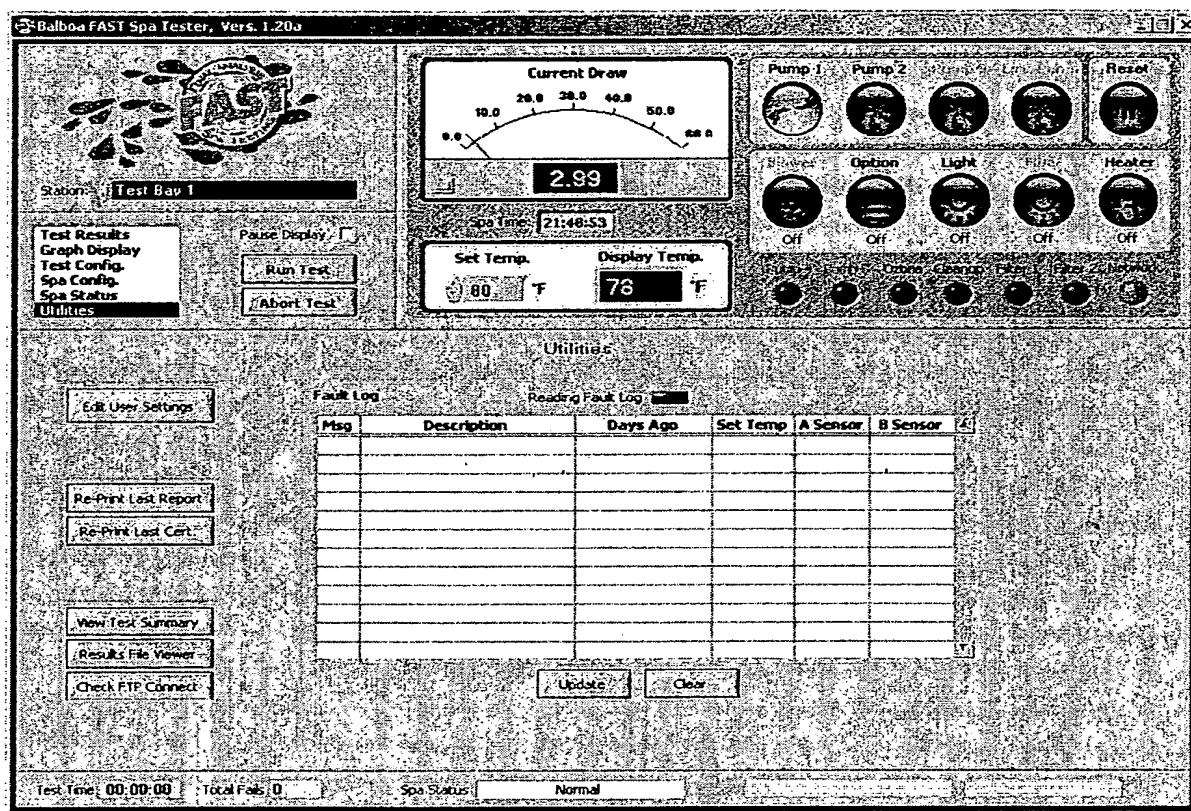


FIG. 11

Test Summary Viewer

Summary Log File: C:\Copy of SnaTest\Tech Read & Summary Log.htm

Start Date	05/02/03	End Date	06/09/03	Today's Test Runs		Print Report			
Start Time	00:00:00	End Time	23:59:59	Selected Test Runs		Done			
				All Test Runs					
Total Runs	153	Completed Runs	172	Passed Units	55	Failed Units	98	% Yield	35.9
Date	Time	Spa Model	Spa S/N	Spa Fds	Operator	Test Station	Test Completed		
05/05/03	09:58:01			0	Operator1	Test Bay 1	Test Aborted		
05/05/03	14:06:31			1	Operator1	Test Bay 1	Test Aborted		
05/05/03	14:12:08		123456	3	Operator1	Test Bay 1	Test Complete		
05/05/03	14:31:11		123456	1	Operator1	Test Bay 1	Test Aborted		
05/06/03	12:11:03	Ultra 1000		0	Operator1	Test Bay 1	Test Complete		
05/06/03	12:12:36	Ultra 1000		0	Operator1	Test Bay 1	Test Aborted		
05/06/03	12:17:11	Ultra 1000		0	Operator1	Test Bay 1	Test Aborted		
05/06/03	12:21:30	Ultra 1000		0	Operator1	Test Bay 1	Test Aborted		
05/06/03	12:22:07	Ultra 1000		0	Operator1	Test Bay 1	Test Complete		
05/06/03	12:24:04	Ultra 1000		0	Operator1	Test Bay 1	Test Complete		
05/06/03	12:34:49	Ultra 1000		0	Operator1	Test Bay 1	Test Complete		
05/06/03	12:37:31	Ultra 1000		0	Operator1	Test Bay 1	Test Complete		
05/06/03	14:29:08			0	Operator1	Test Bay 1	Test Complete		
05/06/03	14:33:09			0	Operator1	Test Bay 1	Test Aborted		
05/06/03	11:50:53	Ultra 5000		0	Operator1	Test Bay 1	Test Aborted		
05/06/03	11:55:22	Ultra 5000		0	Operator1	Test Bay 1	Test Aborted		
05/06/03	11:57:02	Ultra 5000		0	Operator1	Test Bay 1	Test Aborted		
05/06/03	15:51:06	Ultra 5000		0	Operator1	Test Bay 1	Test Aborted		
05/06/03	15:53:08	Ultra 5000		0	Operator1	Test Bay 1	Test Aborted		
05/06/03	15:54:34	Ultra 5000		0	Operator1	Test Bay 1	Test Aborted		

FIG. 11A

Test Result File Viewer						
Test Results File: C:\SpaTest\Test Results\Balboa_Ultra 5000_124453_Results.txt						
<input type="button" value="Format File"/> <input type="button" value="Done"/>						
Pump 2 Type: 2-Speed Pump 3 Type: None Blower Type: 1-Speed Panel Type: ML500 Num. Aux Panels: 1 Pump 1 Model: BX4100 Pump 2 Model: BX4101 Pump 3 Model: None Blower Model: BX1002 Ozonator: Balboa-240V Heater Model: 5KW Pump 1 S/N: Pump 2 S/N: Pump 3 S/N: Blower S/N: Ozonator S/N: Heater S/N: Spa Options: Dimmable Light Fiber Optics Waterfall Stereo Comments:						
TEST DATA						
16:50:39	First Set Of Instructions	Pass		Pass		
16:50:53	Pump 1 ADCM High Verification	Off	Not EQ	High	Fail	
16:51:01	Pump 2 ADCM High Verification	Off	Not EQ	High	Fail	
16:51:01	Pump 2 ADCM Off Verification	Off	EQ	Off	Pass	
16:51:05	Blower ADCM High Verification	Off	Not EQ	High	Fail	
16:51:06	Blower ADCM Off Verification	Off	EQ	Off	Pass	
16:51:10	Light ADCM High Verification	Off	Not EQ	High	Fail	

FIG. 11B

FAST Station Results

Result: **PASS**

Spa Model:	Ultra-2000	Exterior Color:	Grey	Test Station:	15
Serial Number:	0012345	Tub Material:	Red	Script File:	Demo0212-Nc System
Date Tested:	02/06/36 23:42:52	Tub Color:		Total Fails:	0

Time	Measurement	Min	Max	Result
23:35:08	First Set Of Instructions	Pass		Pass
23:35:08	*** Start of Test ***			
23:35:33	Pump 1 ADCM High Verification	High	EQ	High Pass
23:35:51	Pump 2 ADCM High Verification	High	EQ	High Pass
23:36:04	Pump 2 ADCM Off Verification	Off	EQ	Off Pass
23:36:18	Blower ADCM High Verification	High	EQ	High Pass
23:36:20	Blower ADCM Off Verification	Off	EQ	Off Pass
23:36:28	Light ADCM High Verification	High	EQ	High Pass
23:36:31	Light ADCM Off Verification	Off	EQ	Off Pass
23:36:39	Fiber ADCM High Verification	Fiber+Wheel	EQ	Fiber+Wheel Pass
23:36:49	Fiber ADCM Off Verification	Fiber	EQ	Fiber Pass
23:36:56	Fiber ADCM Off Verification	Off	EQ	Off Pass
23:36:56	Heater ADCM On Verification	On	EQ	On Pass

FIG. 11C

FAST Station Results

Result: **FAIL**

Spa Model:	Ultra-2000	Exterior Color:	Grey	Test Station:	15
Serial Number:	0012345	Tub Material:	Red	Script File:	Demo0218.txt
Date Tested:	02/06/36 23:34:31	Tub Color:		Total Fails:	7
Time	Hours: Name	Measurement	Min	Max	Result
23:31:51	Dip Switch A check	8	EQ		Pass
23:31:51	Dip Switch B check	CE	EQ		CE Pass
23:30:52	First Set Of Instructions	Pass			Pass
23:30:57	*** Start of Test ***				
23:31:31	Pump 1 High Current	0.000 Amperes	11.320	13.340	Fail **
23:31:31	ADCM Pump 1 High Verification	High	EQ		High Pass
23:31:54	Pump 2 Low Current	0.000 Amperes	3.000	4.000	2.800 Fail **
23:31:54	ADCM Pump 2 Low Verification	Low	EQ		Low Pass
23:32:19	Pump 2 High Current	0.000 Amperes	7.000	9.000	9.000 Fail **
23:32:20	ADCM Pump 2 High Verification	High	EQ		High Pass
23:32:28	ADCM Pump 2 Off Verification	Off	EQ		Off Pass
23:32:48	Blower High Current	0.000 Amperes	3.000	5.000	5.000 Fail **
23:32:48	ADCM Blower High Verification	High	EQ		High Pass
23:32:50	ADCM Blower Off Verification	Off	EQ		Off Pass
23:32:59	ADCM Light High Verification	High	EQ		High Pass
23:33:01	ADCM Light Off Verification	Off	EQ		Off Pass
23:33:11	Fiber-Wheel Current	0.000 Amperes	1.000	1.800	1.800 Fail **
23:33:11	ADCM Fiber+Wheel Verification	Fiber+Wheel	EQ		Fiber+Wheel Pass
23:33:20	ADCM Fiber Only Verification	Fiber	EQ		Fiber Pass
23:33:29	ADCM Fiber Off Verification	Off	EQ		Off Pass
23:33:31	Heater Current	0.000 Amperes	15.200	20.000	20.000 Fail **
23:33:32	ADCM Heater On Verification	On	EQ	On	On Pass
23:33:58	Water Temp @98	74.000 degrees	97.250	98.750	98.750 Fail **
23:34:26	TEST COMPLETE				

FIG. 11D

Pass Certificate

Certificate of Verification

Date Tested: Wed, Feb 06, 2006

Spa Information

Spa Model: Ultra-2000

Spa S/N: 0012345

Spa Features

Exterior Color: Grey

Tub Material: Red

Tub Color:

Options: Ozone, Waterfall, Stereo, Television, Dimmable Light, pH/ORP Sensor, Mister, Fiber...

Pump 1: 2-Speed

Pump 2: 2-Speed

Blower: 1-Speed

We are proud of the trademark, outstanding quality, and the ultimate performance built into every Spa.

We hope you will enjoy your spa for many years to come.

Signed,

John L. Smith

John L. Smith: Director

FIG. 11E

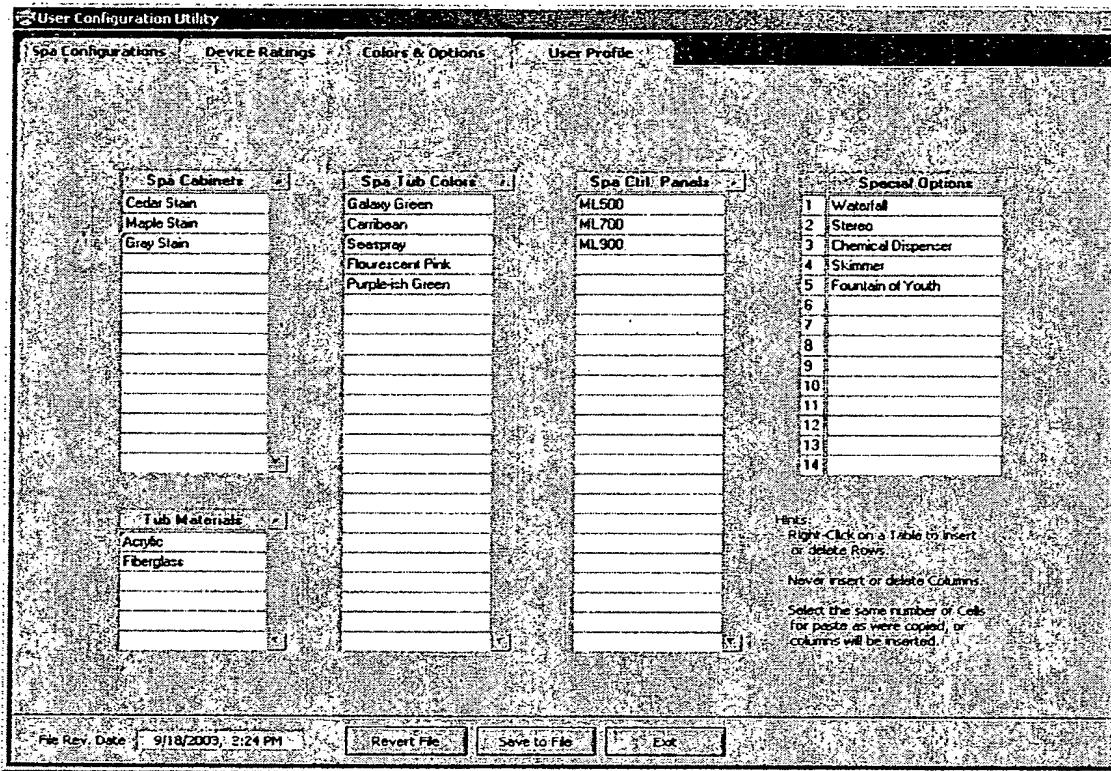


FIG. 11F

User Configuration Utility

Spa Configurations		Device Ratings		Colors & Options		User Profile	
Pump Ratings		Blower Ratings		Ozone/Mister Ratings			
Blsp Model	Low	High	Blsp Model	Low	High	Opn Model	Opn
BX4101	4.00	8.00	BX1002	2.50	5.00	ACME Mister Pump	2.25
BX4102	6.00	10.00	BX1004	4.50	8.00	ACE Mister Pump	1.75
BX4103	8.00	12.00	BX1006	6.50	9.00	User Device1	5.00
Century	3.00	8.00	BX1008	7.50	10.00	User Device2	10.00
Pump 4 Model	0.00	0.00	BX1010	8.50	12.00		
Pump 5 Model	0.00	0.00	Mark	2.10	2.90		
Important: 1. For single speed pumps, specify current in the High column, and set Low value to 0.0. 2. For single speed blowers, specify High. For two-speed blowers specify High and Low currents.							
Circ Pump Ratings		Heater Ratings		Ozone/Mister Ratings			
Circ Model	Amps	Heater Model	Amps	Ozone Model	Amps		
CIRC Pump 1	1.00	5.5KW	20.50	Baboo-120V	5.50		
CIRC Pump 2	2.50	4.0KW	16.80	Baboo-240V	7.50		
Century Circ	4.40			BrandX	11.50		
Fiber Ratings		Spa Light Ratings		Hints			
Fiber System	Fiber	W-Wheel	Light Type	Low	Med.	Right-Click on a Table to Insert or Delete Rows.	
Bulb Type	0.00	0.00	Incandescent	0.05	0.10	Never Insert or Delete Columns.	
LED Type	0.40	1.10	LED Type	0.03	0.09	Select the same number of cells for paste as were copied, or columns will be inserted.	
File Rev. Date	9/26/2003, 1:57 PM	Report File	Save To File	Exit			

FIG. 11G

FIG. 11H

Meas	Failure	Time	Description	Meas	Min	Max	Units	Result																																																																								
		15:48:34	Blower High Current		3.600	4.400	Amps	Fail																																																																								
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Diagnostic Msgs.																																																																																
<table border="1"> <tr><td>OPPA</td><td>Off</td><td>1.5</td><td>Off</td><td>Current Draw</td><td>0.1</td><td>Set Temp</td><td>80.00</td></tr> <tr><td>Normal</td><td>Off</td><td>2.5</td><td>Off</td><td>Input Max</td><td>1.00</td><td>Sensor A</td><td>82.00</td></tr> <tr><td>FFD</td><td>Off</td><td>3.5</td><td>Off</td><td>Start Time</td><td>1:00:41.3</td><td>Setpoint</td><td>82.00</td></tr> <tr><td>Learning</td><td>On</td><td>4.5</td><td>On</td><td>Sp Mode</td><td>Standard</td><td></td><td></td></tr> <tr><td>Ozone</td><td>Off</td><td>5.5</td><td>Off</td><td>UI State</td><td>Priming</td><td></td><td></td></tr> <tr><td>Ozone</td><td>On</td><td>6.5</td><td>On</td><td></td><td></td><td></td><td></td></tr> <tr><td>Ozone</td><td>Off</td><td>7.5</td><td>Off</td><td></td><td></td><td></td><td></td></tr> <tr><td>Ozone</td><td>On</td><td>8.5</td><td>On</td><td></td><td></td><td></td><td></td></tr> <tr><td>Ozone</td><td>Off</td><td>9.5</td><td>Off</td><td></td><td></td><td></td><td></td></tr> </table>									OPPA	Off	1.5	Off	Current Draw	0.1	Set Temp	80.00	Normal	Off	2.5	Off	Input Max	1.00	Sensor A	82.00	FFD	Off	3.5	Off	Start Time	1:00:41.3	Setpoint	82.00	Learning	On	4.5	On	Sp Mode	Standard			Ozone	Off	5.5	Off	UI State	Priming			Ozone	On	6.5	On					Ozone	Off	7.5	Off					Ozone	On	8.5	On					Ozone	Off	9.5	Off				
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FIG. 12